

NATURAL HISTORY MISCELLANEA

Published by

The Chicago Academy of Sciences

Lincoln Park-2001 N. Clark St., Chicago 14, Illinois, U.S.A.

No. 179

December 29, 1963

The Golden Mouse in Southern Illinois

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The range of the golden mouse (*Peromyscus nuttalli*) extends northward from the Gulf of Mexico to northern Kentucky, east central Missouri and the southern tip of Illinois (Goodpaster and Hoffmeister, 1954). Because this species is relatively uncommon in southern Illinois, little is known of its ecology. This paper summarizes past collections in Illinois, reports on additional collections from Pope County, and presents a brief description of the ecology of the species in that area.

Prior to this investigation only seven golden mice were reported from southern Illinois. Layne (1958) collected two golden mice in Alexander and three in Union County in 1954-55. Hoffmeister and Mohr (1957) also reported the occurrence of golden mice in Union County as well as in Johnson County. One specimen from each of these locations was deposited in the mammal collection at the University of Illinois Natural History Museum, Urbana. In the present investigation eight golden mice were collected in western Pope County (Sec. 28, T12S R5E) from April, 1961, to February, 1962. The distribution of all golden mice collected in Illinois to date suggests that the northern extent of their distribution in this state corresponds with the northern boundary of the Shawnee Hills Section of Illinois as defined by Leighton, *et al.* (1948).

The golden mice collected in Pope County were in a severely eroded, 40-acre upland field, last cultivated 25 years ago. Vegetation consisted of trees and shrubs in the drainageways and less severely eroded areas, with the remainder of the field predominately broomsedge (*Andropogon*) and goldenrod (*Solidago*). Dominant trees and shrubs in the drainageways were sassafras (*Sassafras*), persimmon (*Diospyros*), red cedar (*Juniperus*), honey locust (*Gleditsia*), elm (*Ulmus*), and

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wild cherry (*Prunus*) . Herbaceous undercover along the drainageways was primarily honeysuckle (*Lonicera*) , green brier (*Smilax*) , panic grass (*Panicum*) , beggars-tick (*Bid ens*) , and coral-berry or "buck-brush" (*Symphoricarpos*) . In general, undercover was sparse and a thin layer of leaves formed the only ground cover. At the lower ends of the waterways, however, honeysuckle formed dense mats 12 to 18 inches thick.

All of the golden mice collected in Pope County were trapped in or near the band of trees and shrubs bordering one drainageway. Three mice were trapped at the upper end of the drainageway where undercover was very sparse, and four were trapped at the lower end of the same drainageway beneath a dense mat of honeysuckle. One mouse was trapped in broomsedge 10 yards from the shrubs bordering the drainageway. In Alexander and Union Counties, Layne (*op. cit.*) trapped four golden mice in or near canebrakes or brushy situations in moist woodlands and one in a sumac thicket near an open woods with grape vine tangles. Hoffmeister and Mohr (*op. cit.*) state that the golden mouse apparently prefers thick timber bordering cypress swamps. Other areas in western Pope County were trapped, ranging from cultivated fields to mature hardwood forests or cypress swamps, but no golden mice were collected.

The habitat of golden mice collected in this study was more open than that of this species in northwestern Kentucky where Goodpaster and Hoffmeister (*op. cit.*) found that the preferred habitat was nearly impenetrable thickets of honeysuckle, green brier, blackberry (*Rubus*) , wild grape (*V itis*) , dogwood (*Cornus*) and waterbeechn (*Carpinus*) . These authors collected golden mice by gently grasping arboreal nests with the hands and removing the occupants. Few mice were trapped on the ground since, in that area, the mice probably seldom foraged on the ground. Since no arboreal nests were found in the present study, and because all specimens collected were taken on the ground, it appears that the golden mice on the Pope County study area did not exhibit the arboreal habits reported by Goodpaster and Hoffmeister (*op. cit.*) . This is very probably a response to the more open state of the habitat on the Pope County area.

Although it is apparent that golden mice utilize a variety of habitat types in southern Illinois, it appears that they may be limited in distribution within a given habitat type. The abandoned field in which they were trapped in Pope County contained several drainageways with similar habitat, but golden mice were found in only one. The restricted range of the mice in this field may have been related to interspecific associations as well as habitat. The only other small mammal trapped

in the drainageway inhabited by golden mice was the short-tailed shrew (*Marina brevicauda*) . Similar habitat in other drainageways in the field was occupied by white-footed mice (*Peromyscus leucopus*) as well as short-tailed shrews.

Specimens collected in Pope County were deposited in the mammal collection of the University of Illinois Natural History Museum, Urbana.

This work was financed by NIH Grant AI-03077-03, with the University of Illinois, College of Veterinary Medicine, and the Illinois Natural History Survey cooperating.

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